

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/JP2004/013281

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7	H01L21/68	H01L21/52	H01L21/78	B23Q11/00	B23D59/00
	H05K13/04				

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B23Q B23D H01L H05K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 778 326 A (ALTHOUSE ET AL) ✓ 18 October 1988 (1988-10-18) ✓ column 3, line 9 - column 7, line 2; figures 1-4	1-16
X	US 4 921 564 A (MOORE ET AL) ✓ 1 May 1990 (1990-05-01) ✓ column 5, line 23 - column 3, line 12; figures 2,3	1-16
X	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 10, 17 November 2000 (2000-11-17) & JP 2000 195877 A (MATSUSHITA ELECTRIC IND CO LTD), 14 July 2000 (2000-07-14) abstract; figure 2	1-16
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 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
22 February 2005	02/03/2005
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl. Fax: (+31-70) 340-3016	Authorized officer  Angermeier, D

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 018, no. 299 (E-1558), 8 June 1994 (1994-06-08) -& JP 06 061347 A <sup>V</sup> (FUJITSU LTD), ✓ 4 March 1994 (1994-03-04) ✓ abstract; figure 1 -----	1-16
A	PATENT ABSTRACTS OF JAPAN vol. 017, no. 657 (E-1470), 6 December 1993 (1993-12-06) & JP 05 218178 <sup>V</sup> A <sup>V</sup> (FUJITSU LTD), ✓ 27 August 1993 <sup>V</sup> (1993-08-27) ✓ abstract; figures 4,5 -----	1-16